

WHAT IS CLAIMED IS:

1 1. A refrigerator comprising at least one chamber and a temperature adjuster adjusting an
2 inner temperature of the chamber, further comprising:

3 a first temperature sensor approximately sensing the temperature inside the chamber,

4 a second temperature sensor spaced from the first temperature sensor so as to sense the real
5 temperature inside the chamber; and

6 a controller controlling the temperature adjuster according to the temperature sensed by the
7 second temperature sensor when the temperature sensed by the first temperature sensor is within
8 predetermined temperature limits of the chamber and the temperature sensed by the second
9 temperature sensor is not within the predetermined temperature limits of the chamber.

1 2. The refrigerator according to claim 1, wherein the first and second temperature sensors
2 are installed at lower and upper parts of the chamber, respectively; and

3 the controller is programmed with first and second temperature limits to be compared with
4 the temperatures sensed by the first and second temperature sensors, respectively.

1 3. The refrigerator according to claim 1, wherein one of the first and second temperature
2 sensors is removably installed.

1 4. The refrigerator according to claim 2, wherein one of the first and second temperature

sensors is removably installed.

5. The refrigerator according to claim 3, wherein the first temperature sensor is in contact with the bottom surface of the chamber and senses the temperature of the surface of the chamber; and

the second temperature sensor is installed at the upper part of the chamber and senses the inner temperature of the chamber.

6. The refrigerator according to claim 5, wherein at the upper part of the chamber are provided a sensor accommodating part accommodating the second sensor, and a sensor cover opening and closing the sensor accommodating part.

7. The refrigerator according to claim 2, wherein the first and second temperature limits are different each other.

8. The refrigerator according to claim 7, wherein the controller determines whether the temperature sensed by the first temperature sensor is within the first temperature limits, if the temperature sensed by the second temperature sensor is within the second temperature limits, to thereby control the temperature adjuster.

9. The refrigerator according to claim 8, wherein the controller controls the temperature

2 adjuster to allow the temperature sensed by the second temperature sensor to be within the second
3 temperature limits, if the temperature sensed by the second temperature sensor is beyond the second
4 temperature limits, and determines whether or not the temperature sensed by the first temperature
5 sensor is within the first temperature limits, if the temperature sensed by the second temperature
6 sensor is within the second temperature limits, to thereby control the temperature adjuster.

1 10. The refrigerator according to claim 7, wherein the controller controls the temperature
2 adjuster until the temperature sensed by the second temperature sensor is within the second
3 temperature limits, and then determines whether or not the temperature sensed by the first
4 temperature sensor is within the first temperature limits, to thereby control the temperature adjuster.

1 11. The refrigerator according to claim 10, wherein the controller controls the temperature
2 adjuster to allow the temperature sensed by the second temperature sensor to be within the second
3 temperature limits, if the temperature sensed by the second temperature sensor is beyond the second
4 temperature limits, and determines whether or not the temperature sensed by the first temperature
5 sensor is within the first temperature limits, if the temperature sensed by the second temperature
6 sensor is within the second temperature limits, to thereby control the temperature adjuster.

1 12. The refrigerator according to claim 10, wherein the controller controls the temperature
2 adjuster until the temperature sensed by the second temperature sensor is within the second
3 temperature limits, and then determines whether or not the temperature sensed by the first

temperature sensor is within the first temperature limits, to thereby control the temperature adjuster.

13. The refrigerator according to claim 6, further comprising first and second sensor indicators indicating operating states of the first and second temperature sensors; and

wherein the controller controls the operating states of the first and second temperature sensors.

14. The refrigerator according to claim 13, wherein where one of the first and second temperature sensors is determined to be abnormal, the controller allows the concerned sensor indicators to indicate abnormality thereof and determines whether or not the temperature sensed by the other normal temperature sensor is within the temperature limits of the normal temperature sensor, to thereby control the temperature adjuster.

15. The refrigerator according to claim 10, wherein where both the first and second temperature sensors are out of order, the controller allows both the first and second sensor indicators to indicate the abnormalities of both the first and second temperature sensors, and suspends the operation of the temperature adjuster.

16. The refrigerator according to claim 1, wherein the temperature adjuster comprises:
a cooling system cooling the chamber with a compressor, a condenser, an evaporator and a valve which circulate a refrigerant; and

4 a heater heating the chamber.

1 17. A method for controlling a refrigerator comprising at least one chamber and a
2 temperature adjuster adjusting an inner temperature of the chamber, comprising the steps of:

3 sensing the inner temperature of the chamber by means of first and second temperature
4 sensors disposed at different positions each other;

5 determining whether or not the temperature sensed by at least one of the first and second
6 temperature sensors is within predetermined temperature limits of the chamber, to thereby control
7 the temperature adjuster.

1 18. The method according to claim 17, wherein the first and second temperature sensors are
2 installed lower and upper parts of the chamber, respectively; and

3 the predetermined temperature limits first and second temperature limits to be compared with
4 the temperatures sensed by the first and second temperature sensors, respectively.

1 19. The method according to claim 17, wherein one of the first and second temperature
2 sensors is removably installed.

1 20. The method according to claim 18, wherein one of the first and second temperature
2 sensors is removably installed.

1 21. The method according to claim 18, wherein the first and second temperature limits are
2 different each other.

1 22. The method according to claim 18, further comprising the step of determining whether
2 the temperature sensed by the first temperature sensor is within the first temperature limits, if the
3 temperature sensed by the second temperature sensor is within the second temperature limits, to
4 thereby control the temperature adjuster.

1 23. The method according to claim 21, further comprising the steps of controlling the
2 temperature adjuster to allow the temperature sensed by the second temperature sensor to be within
3 the second temperature limits, if the temperature sensed by the second temperature sensor is beyond
4 the second temperature limits, and determining whether or not the temperature sensed by the first
5 temperature sensor is within the first temperature limits, if the temperature sensed by the second
6 temperature sensor is within the second temperature limits, to thereby control the temperature
7 adjuster.

1 24. The method according to claim 19, further comprising the step of controlling the
2 temperature adjuster until the temperature sensed by the second temperature sensor is within the
3 second temperature limits, and then determining whether or not the temperature sensed by the first
4 temperature sensor is within the first temperature limits, to thereby control the temperature adjuster.

1 25. The method according to claim 22, further comprising the steps of controlling the
2 temperature adjuster to allow the temperature sensed by the second temperature sensor to be within
3 the second temperature limits, if the temperature sensed by the second temperature sensor is beyond
4 the second temperature limits, and determining whether or not the temperature sensed by the first
5 temperature sensor is within the first temperature limits, if the temperature sensed by the second
6 temperature sensor is within the second temperature limits, to thereby control the temperature
7 adjuster.

1 26. The method according to claim 25, further comprising the step of controlling the
2 temperature adjuster until the temperature sensed by the second temperature sensor is within the
3 second temperature limits, and then determining whether or not the temperature sensed by the first
4 temperature sensor is within the first temperature limits, to thereby control the temperature adjuster.

1 27. The method according to claim 17, further comprising the step of checking operating
2 states of the first and second temperature sensors and indicating the operating state of the first and
3 the second temperature sensors by means of the first and the second sensor indicators.

1 28. The method according to claim 27, further comprising the step of allowing the concerned
2 sensor indicators to indicate abnormality thereof where one of the first and second temperature
3 sensors is determined to be abnormal, and determining whether or not the temperature sensed by the
4 other normal temperature sensor is within the temperature limits of the normal temperature sensor,

5 to thereby control the temperature adjuster.

1 29. The method according to claim 27, further comprising the step of allowing both the first
2 and second sensor indicators to indicate the abnormalities of both the first and second temperature
3 sensors, and suspending the operation of the temperature adjuster, where both the first and second
4 temperature sensors are out of order.

1 30. The method according to claim 17, wherein the temperature adjuster comprises:
2 a cooling system cooling the chamber with a compressor, a condenser, an evaporator and a
3 valve which circulate a refrigerant; and
4 a heater heating the chamber.